BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF HAWAII

In the Matter of the Application of MOLOKAI PUBLIC UTILITIES, INC. For review and approval of rate increases; revised rate schedules; and revised rules.	)	DOCKET NO. 2009-0048

DIRECT TESTIMONIES AND EXHIBITS

OF

WEST MOLOKAI ASSOCIATION

Lyle Dunham, Witness
Robert B. Marusich, Witness
Larry K. Fujino, Witness

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WEST MOLOKAI ASSOCIATION

Lyle Dunham: Testimony T-1 & 100 Series of Exhibits
Robert B. Marusich: Testimony T-2 & 200 Series of Exhibits
Larry K. Fujino: Testimony T-3 & 300 Series of Exhibits

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DIRECT TESTIMONY AND EXHIBITS OF LYLE DUNHAM

- Policy Statement
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DIRECT TESTIMONY OF LYLE DUNHAM

Q. Please state your name, address, and occupation.

A. My name is Lyle Dunham. I reside part-time at my home on Molokai and and part-time at my home in Montana. Officially, I am retired; however, I seem to be fully occupied with matters related to West Molokai Association, an organization for which I currently serve as President.

Q. What is the scope of your testimony in this proceeding?

A. I am not a witness testifying on technical matters on behalf of the Association. The Association has employed a retired consulting engineer and a forensic certified public accountant to prepare technically-based testimonies for this proceeding.

The scope of my testimony is two fold: (1) to place this case in the context of consumers, and (2) to provide a Statement of Policy.

Q. Please provide a brief profile of your Association.

A. When Kaluakoi was developed in the late 1960's/early 1970's by Molokai Ranch, Ltd. (now, Molokai Properties, Ltd. or "MPL") and its predecessors, the covenants that were established and incorporated into the deeds for the individual parcels of land required land owners to be members of a community association. The association is now West Molokai Association ("WMA"). Today, there are 812 separate, owned interests in real property.

As with any community association, our interests are in maintaining and improving the community's infrastructure and amenities. Of late, WMA's emphasis has been on retaining what we have, which is much less than what we once had. This proceeding is indicative of WMA's current agenda: retaining basic infrastructure. WMA

is pursuing or will soon be pursuing similar tasks in other forums: roadway improvements, fire protection, etc.

Q. What did you assert as policy guidelines to your witnesses, which are germane to this proceeding?

A. I have four thoughts on the matter.

First, the Association knows the Commission has many cases that are much larger in terms of dollars, size of the service area, and complexity of issues. Nevertheless, WMA is facing two critical issues: (a) the availability of potable water, at any price and (b) potable water at rates which are fair to both the provider and to the consumer. I cannot imagine any other Commission proceeding that impacts individuals as much as this case impacts the members of WMA.

Secondly, the members of WMA feel "manipulated" or "abandoned" by MPL and its affiliated companies. There have been various owners of "Molokai Ranch" since the development of Kaluakoi Resort, Kaluakoi Golf Course, residences, condominiums, and time shares at the West End of Molokai. The current owner's actions and inactions appear to have no long-term plans for the area. Its interests focused only on the proposed development at La'au Point. Once that proposal died, it abandoned most of what it owned on Molokai for an unknown period of time.

The record will show that MPL and its owner are still legally-obligated to provide water, but if the near-term consequences of their landbanking their properties become complicated or unduly expensive, the property may be "forfeited". Thus, the County of Maui, the residents of the island of Molokai, the State government and WMA's membership face major challenges.

Thirdly, the crisis situation in which WMA and MPU find themselves is attributable to many sources over many years. Availability of potable water is one crisis, but there are others, unrelated to this case. In this proceeding, no one should talk about a fair return to the shareholder. That sole shareholder has been a major cause of many of the problems we must address in this case.

Point Three leads me to Point Four: Virtually all of the proposed 200 percent increase in water rates is unnecessary. No increase in the permanent rates is required if (1) grossly excessive water losses were substantially reduced and (2) MPU's rate structure were redesigned with the objective of recovering costs from the cost causers.

Q. What is WMA's objective in this water rate proceeding?

A. For certain, to address the proposed across-the-board 202% increase in rates. As part of the task of addressing the rate issue, WMA wants MPU's rates and rate design to recover all of MPU's expenses reasonably incurred to provide water, and to stabilize the revenues, in order to avoid expensive rate proceedings such as this. In that regard, WMA endorses MPU's concept of Energy Adjustment Clauses (one for power; one for fuel). WMA having endorsed the concept of two automatic adjustment clauses, I direct your attention to WMA Testimony-2, where Witness Marusich has developed alternative formulae, revising the energy adjustment clauses to deal with excessive water losses. WMA members should not pay for energy used to move lost and unaccounted for water in excess of industry standards, especially by means of automatic adjustment clauses which fail to account for wasted energy pumping wasted water.

Q. What sources of information did you and your experts rely upon to prepare WMA's testimonies?

A. Much effort and considerable expense has been incurred to prepare WMA's case. WMA's costs were somewhat controlled by WMA's reliance on some outside sources. The major sources of information relied upon are the following:

1. HPUC Docket No. 5471
2. HPUC Docket 2002-0371
3. The CWRM Well #17 Permitting Process.
4. The related Supreme Court Decision, Order and Opinion.
5. The direct testimonies and Exhibits of MPU, in this case.
6. The direct testimony and Exhibits of WOM in HPUC Docket 2009-0049
7. HPUC Docket No. 2008-0115
8. MPL's La'au Point Application.
9. Heavy reliance on MPU's Responses to all of the IR/SIR's filed in this case.

Q. Please explain Exhibit WMA-101.

A. Exhibit WMA-101 is a comparison of the proposed revenue requirements formulated by MPU and WMA. WMA looked at operations only because WMA feels strongly that the shareholder should not earn a return on rate base until such time as MPU at least begins to maintain and repair its plant-in-service. It is a summary exhibit. Support for each of the line item adjustments proposed by WMA is well-documented in WMA's T-2 and T-3, and the exhibits accompanying those testimonies.

Q. Please explain your Exhibit WMA-102.

Q. Please explain your Exhibit WMA-102.

A. Exhibit WMA-102 sets forth WMA's proposed retail rates for inclusion in MPU's tariff. WMA recommends wholesale and retail usage rates (per TG) and fixed monthly facilities charges.

Again, I repeat two points. First, the justifications for redesign of MPU's rate structure are contained in WMA T-2 and T-3, and accompanying exhibits. Secondly, WMA's proposed rates for MPU -- while believed to be just, fair, reasonable, fully compensatory, otherwise legal, and suitable for adoption by the Commission -- could be further refined with more cost data and more consumption/demand data. Neither data set was available to WMA in the detail requested of MPU by WMA. Of course, if a comprehensive cost of service study were conducted, the results would be even further refined.

WMA looks forward to working with MPU, and the Commission to put into an implementable format WMA's proposed restructured rates.

Q. Does that complete your testimony?

A. Yes, it does.

Results of Operations
Test Year Ending June 30, 2010

Line No.	Description		(A) MPUI Estimates	(B) WMA Adjustments	(C) WMA Test Year
1	Monthly Customer Charge		160,656		454,518
2	Water Usage Charge		1,164,241		419,900
3	Consumer Service Charge		0		0
4	Customer Availability Charge		0		0
5	Late Fees		1,200		3,600
6	Total Operating Revenues		1,326,097		878,018
7	Labor, Payroll Taxes & Employee Benefits		209,865	(65,862)	144,003
8	Fuel Expense		282,524	(151,684)	130,840
9	Power Expense		231,067	(148,737)	82,330
10	Department of Agri - Rental/Service	(a)	136,497		136,497
11	Materials & Supplies		85,583		85,583
12	Affiliated Charges		9,600		9,600
13	Professional & Outside Services		14,137		14,137
14	Repairs & Maintenance		65,812		65,812
15	Insurance		13,000		13,000
16	Regulatory Expense	(b)	55,000	(40,714)	14,286
17	General & Administrative		13,318		13,318
18					
19					
20	Total O & M Expense		1,116,403	(406,997)	709,406
21	Taxes Other Than Income	(c)	84,671		56,061
22	Depreciation		92,479		92,479
23	Amortization		0		0
24	Income Taxes	(d)	0		0
25	Diff due to changing factors		2		0
26	Total Operating Expenses		1,293,555		857,946
27	Operating Income		32,542		20,072
28	Average Rate Base		996,161		996,161
29	Return on Rate Base				2.01%
30	Target Rate of Return				
31	Increase in Rate of Return				
32	Increase in NOI				
33	Gross Revenue Conversion Factor				1.06820
34	Proposed rates				878,018
35	Present rates				(439,838)
36	Increase in Revenue				438,180
37	Percent Increase in Revenue				99.62%

(a) Revised by response to CA - IR 41
(b) 12/31/09 Response to CA-IR-49a updates this amount
(c) Public Service Tax 5.885% + Public Utility Fee 0.500%
(d) Response to CA - SIR - 20 removes Income Taxes

WMA'S PROPOSED MONTHLY FACILITIES CHARGES, BY RETAIL CUSTOMER CATEGORY, TO BE INCORPORATED INTO MPU'S TARIFFS

	RATE
Improved Parcels	$49.50
Unimproved Parcels	$35.00
Condominiums (per unit)	$20.00
Hotel (per unit)	$20.00
Golf Course	$8,400.00
Beach Park	$200.00
Beach Access Points	$100.00

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DIRECT TESTIMONY AND EXHIBITS OF ROBERT B. MARUSICH

- Fuel Expenses
- Electricity Expenses
- Automatic Energy Adjustment Clauses
- Water Volume and L & U Water

DIRECT TESTIMONY OF ROBERT B. MARUSICH

Q. Please state your name, place of residence and professional background?

A. I am Robert B. Marusich. I reside part-time in Hermosa Beach, CA and part-time in Kaluakoi, Molokai. I have been actively engaged in the engineering profession for nearly 50 years—beginning with technical assignments pertaining to the development, test and evaluation of military electronic equipment and systems, followed by subsequent promotions to supervisory and project management positions. In the last 30 years, I have been in private practice as the sole owner of one or more engineering firms. During this time period, my work has been predominantly concerned with the design, construction, operation and rehabilitation of industrial, aerospace and commercial facilities—with special emphasis on facilities that must operate 24/7, such as, hospitals, large manufacturing plants, mainframe computer centers, etc. A brief biographical sketch is attached and marked as Exhibit WMA-200.

Q. What is your relationship to the West Molokai Association (WMA)?

A. I am a member of WMA by ownership of two units in the Paniolo Hale Condominium Development, a portion of the Kaluakoi Resort. At present I am an elected Director of both the West Molokai Association and the Paniolo Hale Association of Apartment Owners (AOAO).

Q. What is your scope of work in this engagement?

A. My services are being provided on a voluntary basis, without reimbursement of any kind. My engineering firm, Electri-Planners, Inc. is not under contract with WMA or Paniolo Hale's AOAO for this or any other work.

Q. Have you ever testified before this Commission?

A. Yes, but only at the Public Hearing held in Kaunakakai on September 3, 2009 for these proceedings. I testified in person and expanded upon my oral remarks with written testimony that is included in the record of that public hearing.

Q. How did you begin an analysis of Molokai Public Utility's (MPU's) Application?

A. As in the analysis of any construction cost proposal, one looks at the "big ticket" items first. In this rate case, energy costs are massive, relative to other line items. So, one's first reaction is—why? After scanning the document record for the prior general rate increase case, PUC Docket No. 2002-0371, lost and unaccounted for (L&U) water seemed to be the key issue. Hence, that became the logical starting point for my own analysis. However, one needs to understand the physical plant in considerable detail, the general sequence of water flow through the system, as well as the vocabulary/frame of reference used previously before any meaningful calculations can be performed.

Descriptions of the facilities that existed in 2002, the frame of reference for analysis, and much of the specific vocabulary were found in the public record for the prior rate case. Of particular relevance were:

a) The written testimony of Mr. Harold Edwards, as contained in the original application filed on October 11, 2002;

b) MPU's Response to the Consumer Advocate's Information Requests (IR's) filed on March 12, 2003;

c) MPU's Responses to the Consumer Advocate's Supplemental Information Requests (SIR's) filed on April 10, 2003; and

d) Locations of the various meters as shown on maps provided by MPU in Attachment CA-IR-3c.

Q. Please describe the way losses are calculated?

A. The efficiency of any process or operation is generally defined as the ratio of the process output divided by the process input, and is a number less than or equal to one. Losses are generally described/calculated as (1.00 – process efficiency). To express the efficiency or losses in percent, multiply either numerical value (< 1.00) by 100%.

The efficiency of any series of processes, operations or stages is the product of the efficiency of each individual process, operation or stage. In the context of these proceedings, the overall efficiency of the utility's distribution system is the product of at least five separate stages.

1) Well #17 pump and 0.4MG storage tanks (i.e., source equipment)

2) Transmission from Well #17 to the Molokai Irrigation System (MIS)

3) Transmission through the MIS to the Mahana Pump Station

4) Transmission, Storage and Treatment Segment from the Mahana Pump Station to the two Project Meters supplying the "Retail Service Area"

5) Storage tank and distribution pipelines throughout "Retail Service Area" from the two Project Meters to the retail customer meters.

Losses in Stages 1 and 2 above are believed to be minimal and, thus the efficiency of these stages is usually considered to be near unity (1.00). The efficiency of Item 3, the MIS transmission system, cannot be more than 0.90 by an earlier written contract, now

expires, but still adhered to. The efficiency of Items 4 and 5 dominate the calculation and are shown herein to be approximately 0.770 and 0.778, respectively. The product of these three values is approximately 0.539, or 53.9%. Expressed in other terms, nearly two gallons of water must be withdrawn from Well #17 to deliver a single gallon of water to MPU's retail customers

Q. What do you mean by the term "retail service area"?

A. The term "retail service area", as used in my testimony, is intended to differentiate the 820 retail customers within the Kaluakoi Resort, from the one wholesale customer (Waiola O'Molokai) that supplies water to the town of Kualapuu. More specifically, the "retail service area" consists of:

Description	Quantity
Papohaku Ranchlands Subdivision	274 parcels
Moana Makani Subdivision	32 parcels
Fairway Lots Subdivision	16 lots
Kepuhi Beach Resort (formerly Kaluakoi Villas)	148 units
Ke Nani Kai Condominiums	120 units
Paniolo Hale Condominiums	78 units
Kaluakoi Hotel	144 rooms
County Beach Park	1
County Beach Access Facilities	6
Golf Course	1
Total	820

Q. And what are your overall conclusions?

A. Overall water losses in the segments of MPU's storage, treatment and distribution system from the Mahana Pump Station to the 820 retail customers is about the same as it was seven years ago, but the components are quite different, as shown below:

	2002	2009
Distribution Pipelines in Retail Service Area	5.17%	17.1%
Filter Backwash at Puu Okoli	16.1%	----
Transmission, Storage & Treatment-Mahana to Retail Service Area POC's	23.2%	23.0%
	44.3%	40.1%

In PUC Docket No. 2002-0371, the last general rate case, the definition of lost and unaccounted (L&U) water was referenced to the "water available for sale". This term was defined to be the amount of raw water at the Mahana Pump Station, after MIS retentions, and NOT as the total production at Well #17. Losses shown above for 2009 have been referenced to the same point in the system for an accurate comparison.

Clearly, losses throughout the retail service area have increased dramatically, indicating that the transmission mains and retail service laterals are in much worse shape now, then seven years ago. By the Company's own admissions in these proceedings, it does not have a systematic plan for the maintenance, repair and improvement of its pipelines and facilities, nor does it intend to develop such a plan. WMA contends that such a position is irresponsible for a regulated public utility, and should not be tolerated.

Filter backwash losses at Puu Okoli were eliminated upon completion of the new water treatment plant at Puu Nana in 2005. Filter backwash losses at the new Puu Nana water treatment plant are believed to be less, but the lack of definitive metered data prevents a rigorous analysis. Filter backwater losses at Puu Nana are included in the 23.0% value cited above. However, some tangible value was derived from the non potable Puu Okoli backwash water, as it was conveyed to the Golf Course for irrigation purposes. Filter backwash water at Puu Nana is discarded.

Q. Describe the calculations in Exhibit WMA-201

Water loss calculations for the distribution system within the retail service area are presented in Exhibit WMA -201. The general formula used for these calculations is:

Total Water Input = Total Water Output + Inventory Accumulations + Segment Losses.

Restated for the specific conditions application to this segment of MPU's physical plant, the formula becomes:

Segment Losses = (Kaluakoi Project Metered Input) +
(Moana Makani Bypass Metered Input) - (Puu Okoli Reservoir Inventory Gain) –
(Total Usage Billed in Service Area)

Metered water deliveries to this segment of MPU's physical plant and facilities were taken from the reports entitled "Molokai Properties Intercompany Water Sales", as included in the public record for PUC Docket No. 2008-0115.

Billing information was extracted from the monthly financial reports furnished by Molokai Properties, Limited (MPL) that are included in the public record for PUC Docket No. 2008-0115. Total billings in the retail service area were calculated by

subtracting the Kualapuu bulk water sales billed to Wai'ola O Molokai (WOM) from MPU's total billed water usage for the same monthly billing interval. Where actual meter readings for the Kualapuu billings were unavailable, the billed dollar amount was divided by the bulk sales rate of $1.125 per thousand gallons (TG).

The analysis in this two-page exhibit reveals that 22.2% of the finished (potable) water delivered to MPU's retail service area is lost or unaccounted for before it passes through the retail customer meters. Expressed in other terms, the losses amount to 28.5% of the total amount billed to retail customers.

Q. Please describe your calculations of water losses through the Puu Nana Raw Water Reservoir, Water Treatment Plant and Maunaloa Potable Water Storage Reservoir?

A. Exhibit WMA-202 sets forth my calculations for water losses through the segment of the physical plant from the Mahana Pump Station to the Kaluakoi and Moana Makani Bypass project meters. Specifically, this segment of the physical plant includes the 7.0 MG raw water reservoir at Puu Nana, the new (2005) water treatment plant at Puu Nana, the 2.0 MG finished water storage reservoir at Maunaloa and the interconnecting pipelines. However, since there are two raw water input sources and two finished water output pipelines, meaningful calculations must include both inputs, both outputs and water inventory (storage) fluctuations. The general formula for such calculations is the same as used previously for Exhibit WMA-01:

Total Water Input = Total Water Output + Inventory Accumulations + Segment Losses

Restated for this segment of MPU's physical plant, the formula becomes:

Segment Losses = (Mahana Pump Input) + (Mountain Water Input) – (Kaluakoi Project Meter Deliveries) – (Moana Makani Bypass Meter Deliveries) – (Maunaloa Deliveries) – (Manawainui Deliveries) – Puu Nana Raw Water Inventory Gain – Maunaloa Finished Water Reservoir Gain

Tabulated monthly meter readings for the Mahana Pump Station have been provided by MPU in response to information requests from the Consumer Advocate (CA) and WMA (refer to MPU Attachment CA-IR-37a and MPU Attachment WMA-IR-119).

Meter readings for the remaining items were taken directly from the reports entitled "Molokai Properties Intercompany Water Sales", as included in the public record for PUC Docket No. 2008-0115. Inventory levels for the two reservoirs were not available at the time of this analysis.

It should be noted that the total storage capacity in this portion of the system is approximately 9.0 MG. The maximum variation in inventory levels is expected to be on the order of 1 to 2 MG and, therefore, inventory gains/losses will have little effect on calculations based upon 12 months of data.

The analysis in this two-page exhibit shows that 23.0% of the raw water obtained from the MIS is lost or unaccounted for as it passes through this segment of MPU's physical plant. Possible reasons for such losses could include, but are not necessarily limited to, the following:

a) Evaporation from the surface of either reservoir;

b) Seepage into the ground from either reservoir;

c) Filter backwash and other discharges at the Puu Nana water treatment plant;

d) Leakage in transmission pipelines, etc.

Additional instrumentation and engineering studies would be required to quantify the magnitude of each possible component. However, by its own admission in these proceedings, MPU does not have a systematic plan to assess the condition of the Company's physical plant and facilities, nor does it intend to prepare one. Again, WMA contends that such a position is irresponsible for a regulated public utility, and should not be tolerated by the Commission.

Q. How did you calculate fuel expenses for the diesel engine at Well #17?

A. Diesel fuel expenses calculated in Exhibit WMA-203 assume that ALL of the actual losses derived in Exhibits WMA-201 and -202 are allowable. These calculations are also based on the reduced estimate of test year billings in the retail service area (104,000 TG) developed in Exhibit WMA-207, and not the value of 112,000 TG presented in MPU's application. Note the striking difference between the diesel fuel expense per billing unit (TG) at Kualapuu and at the retail service area.

In PUC Docket No. 2002-0371, the last general rate case, the definition of lost and unaccounted (L&U) water was referenced to the "water available for sale". This term was defined to be the amount of raw water at the Mahana Pump Station, after MIS retentions, and NOT as the total production at Well #17. For any given loss amount in TG, dividing by the larger number (i.e., the total production at Well #17) reduces the percentage amount and, consequently, makes the applicant's calculations appear to be more reasonable.

Using the same calculations as in the previous rate case, lost and unaccounted (L&U) water, as a percentage of water available for sale, is 40.1% [(173,598 –

104,000)/173,598] x 100%. This is quite a bit above the 10% to 15% level deemed to be acceptable. The "acceptability" of any portion of the L & U water must have this frame of reference or context.

In the prior rate case, DCA took the position that L&U water should be limited to ("capped at") 10% of the water available for sale. Exhibit WMA-204 repeats the diesel fuel expense calculations for this condition. Note the striking change in the per unit expense at the west end. If losses are limited to 10% in this context, then MPU does not recover about $50,000 of their diesel fuel bills (at the current rate of $2.568 per gallon).

Q. How does the limitation of water losses impact the application of the proposed Purchased Fuel Adjustment Clause?

A. Implementation of the Purchased Fuel Adjustment Clause (PFAC) is a major concern. The full amount of the PFAC surcharge should be added to the bulk sales rate for Kualapuu inasmuch as losses should be minimal in that pipeline. However, for billings in the retail sales area, the PFAC surcharge should be reduced. Customers in the retail service area should not be required to pay for excessive water losses and/or other inefficiencies via any "pass through" billing procedure or surcharge. I propose that the PFAC fuel surcharge applied to customers in the retail area be reduced by the following percentage:

100% x [Raw water into MIS (10% limit)] / [Raw water into MIS (actual losses)]

100% x [128,395/192,887] = 66.5%

Q. Didn't MPU and the Consumer Advocate agree to a compromise as to the treatment of L & U water in the last rate case?

A. The record indicates that the settlement agreement included a compromise value of 15% for rate making purposes. I disagree with that value for several reasons.

First, it effectively establishes a performance standard that is based solely upon a negotiated deal, and not on generally accepted industry standards.

Secondly, even if a compromise of 15% was acceptable as a standard, it must be applied to the appropriate base. That is why I urge the Commission to undertake two tasks with regard to the L & U water issue:

1. Adopt the 10% standard - - the dollar impact is significant, as Exhibits WMA-203 and -204 illustrate.

2. Reduce the amount of MPU's proposed fuel adjustment clause (PFAC) applied to bills in the retail service area, by an objective, straightforward accounting procedure or formula. The objective here is to prevent the establishment or perception of a public policy that would automatically pass any portion of disallowed pumping expenses to the customer base.

Q. Did you address the issue of reasonable electricity expenses?

A. Yes, I did. And to do a fair analysis of the issue, one has to examine the electrical consumption at each of the various locations where electrical energy is metered.

Q. Please explain your approach.

A. The amended application and the monthly financial reports provided in PUC Docket No. 2008-0115 identify Maui Electric Co., Ltd (MECO) services/meters at four locations. Revenue requirements at the new base rates for these locations are:

Meter Description/Purpose	Amount
Mahana 200 hp pump	$ 492

Mahana 500 hp pump, from WMA-205	$61,728
Puu Nana Meter (WTP), from WMA-206	$21,550
Palaau Meter	(TBD)
Total	$83,770

The 200 hp pump at the Mahana Pump Station is in place for standby purposes only. Monthly bills for the last 30 months or so remain at the minimum service charge of approximately $41/month.

The revenue requirement for the Mahana 500 hp Pump is the product of three factors:

1) The volume of water required at that location in the distribution system to generate total billings of 104,000 TG in the retail service area;
2) The pump efficiency factor (or constant) in terms of kWh/TG; and
3) The anticipated cost of electricity ($/kWh) throughout the test year.

For these calculations, the total volume of water required from the MIS is obtained from Exhibit WMA-204 for the condition that water losses are limited to "capped" at 10% of the "water available for sale".

Calculations for the pump efficiency factor, or pump constant, are presented in Exhibit WMA-205 for three different time intervals (i.e., last 12 months, FY2009 and FY2008). Given sufficiently accurate source data, the results are indicative of the pump's condition. Note that the number of kilowatt hours required to lift 1,000 gallons of water has increased by approximately 4.0% in FY2009, and by approximately 4.1% in the last twelve months, relative to the average value calculated for FY2008.

Estimating the actual price of electricity during the Test Year is, perhaps, the most difficult aspect of the calculations. In simpler times, one could use historical cost data with considerable certainty. But these days, one has to contend with the Energy Cost Adjustments in electricity bills that are virtually impossible to predict with any degree of certainty. Over the last year or so, the Energy Cost Adjustment component of MECO bills has been decreasing significantly, in general conformance with the decline in oil prices.

MPU has proposed an energy cost adjustment factor as a component of the billing process and refers to it as an Automatic Power Cost Adjustment Clause or "APCAC". Its implementation is described on pages 41 and 42 of Mr. O'Brien's testimony in the Amended Application. Such a clause isolates the Company from large fluctuations in electricity costs and is not unreasonable in principle. But the devil is the details.

I used the latest available MECO bill for the Mahana 500 hp Pump, dated 08-26-2009, as the basis for the new 500 hp pump base rate subject to adjustment through the APCAC. As shown in Exhibit WMA-205, the new base rate is $0.20111 per kWh and the allowed electricity expense for the Mahana 500 hp Pump is $61,728.

MECO bills for the Puu Nana meter, for the period from October 2008 through September 2009, were extracted from the monthly financial reports filed under PUC Docket No. 2008-0115. Monthly electrical energy usage (kWh), dollar costs and water usage billings (TG) are summarized on page 1 of Exhibit WMA-206. Total electrical usage during this 12 month period was 93,820 kWh. Total billings for finished (potable) water in MPU's retail service area were 102,477 TG during the same period.

Derivation of the process constant (i.e. electrical energy efficiency factor) for the water treatment plant is shown on page 2 of Exhibit WMA-206. The billed water usage in MPU's retail service area (102,477 TG) was "grossed up" by the actual loss factor derived in Exhibit WMA-201 in order to determine the amount of water required from the two MPU project meters. Finished water deliveries through the Maunaloa and Manawainui meters were added, and the resultant value (153,279 TG) was "grossed up" by the actual loss factor derived in Exhibit WMA-202 to obtain the raw water requirement for both sources (199,109 TG). The process constant was calculated by dividing the total electrical energy usage (93,820 kWh) by the total volume of raw water supplied to the waste treatment plant (199,109 TG).

The allowable electrical energy expense in the test year for the Puu Nana meter is derived on page 3 of Exhibit WMA-206. The most recent MECO electrical bill, dated 09-24-2009, was used to establish the new base rate for this component of the total electricity expense. For rate making purposes, the raw water entering the treatment plant is limited to (i.e., "capped at") 115,555 TG as per Exhibit WMA-204. For these calculations, the estimated deliveries to the Maunaloa and Manawainui project meters during the test year are assumed to be approximately the same as the deliveries in the 12 month historical period (i.e., September 2008 through September 2009). The estimated metered deliveries through the Maunaloa and Manawainui meters during the test year were "grossed up" by 129.9 % to determine the raw water required from the Mountain Water System. The allowable volume of water entering the water treatment plant from the MIS is then added and the total allowable raw water input (144,133 TG) is then multiplied by the process constant to obtain the allowable electrical energy usage (kWh)

in the test year. In turn, this value is multiplied by the new base rate to determine the allowable electrical energy expense in the test year for the Puu Nana meter.

MPU has yet to provide definite information regarding the equipment served by the Palaau Meter or the purpose of said equipment. Both WMA and the CA have made information requests on this subject (CA-IR-2, CA-IR-36b and WMA-IR-213) but the only information received to date is:

"The Palaau electric charges are for the Palaau pump that is required to circulate water flow in that section of the Company's service territory."

"The pump served by the Palaau meter recycles water at that location and does not provide service to any other equipment"

For the twelve month period from August 26, 2008 through August 26, 2009, the total billing for this meter was $17,192.56 - - not an insignificant amount to re-circulate water for some unspecified purpose at some unidentified location.

Q. What is your position with regard to the automatic pass through of changes in the costs of purchased electrical energy to MPU's customers?

A. So long as the allocation of increased electrical energy costs to MPU remains objective, WMA does not object to the concept. But as I have pointed out, both the efficiency of electric motors and the pumps powered by the motors degrade over time. Thus the Commission has to be very careful in devising a formula that may indirectly encourage lax maintenance practices and/or prolonged deferral of repairs or replacements of equipment with high operating costs.

Q. **What are the implications of combining raw water at Puu Nana from the two distinct sources?**

A. The Puu Nana Raw Water Reservoir (7.0 MG) provides temporary storage for untreated water delivered from two sources:

- Well #17 water via the MIS and the Mahana Pump Station
- MPL's Mountain Water System via gravity flow through an 8 inch pipeline.

As illustrated in Exhibits WMA-202 and -206, calculations involving the facilities located at Puu Nana and Maunaloa are complicated by the co-mingling of the two raw water sources. Certain calculations and formulas used in the prior general rate case do not produce accurate results when the raw water streams are combined prior to treatment and subsequent storage or distribution. In other words, water from Well #17 and the MIS cannot be differentiated from water supplied via MPL's Mountain Water System after the streams are mixed. Consequently, the procedures, methods and practices involved in the day to day blending of the two water sources are of concern to WMA.

MPU has not provided much insight into the methods, practices and/or procedures actually used to achieve an appropriate mix (blend) of the two input sources over any given time interval. Specifically, WMA has sought detailed information regarding:

a. Mahana Pump operating schedules, and adjustments thereof from time to time, so that raw water inflows from the Molokai Irrigation System (MIS) generally conform with finished water amounts delivered to the MPU project meters, and

b. Scheduling and control of deliveries of untreated water from the Mountain Water System, and adjustments thereof from time to time, so that inflows from this source generally conform to finished water amounts delivered to the Wai'ola O Molokai (WOM) project meters.

Some of the requested information has been provided in MPU's responses to WMA's SIR's, but I did not have the opportunity to finish a review or analysis of the responses prior to submitting this written testimony.

Of concern to WMA is the use of Well #17 water as a source of supply to WOM customers, over an extended period of time, without adequate compensation or reimbursement in kind. Furthermore, WMA contends that substitution of Well #17 water for Mountain Water, in substantial quantities for extended periods of time is improper because:

1) Such practices have not been disclosed to the public or reported to the Public Utilities Commission.

2) Large scale water swaps (water "banking") practices will distort the financial records of both MPU and WOM and may render them inadequate for subsequent cost analysis purposes.

3) Such practices may result in violations of ground water withdrawal limitations established by the CWRM.

4) Such practices clearly do not comply with the "arms length" accounting standards applicable to transactions between two wholly-owned subsidiaries of one company.

The calculations in Exhibit WMA-207 cover the 12 month period from November 2008 through October 2009. For this 12 month period, withdrawals from the MIS were approximately 11.4 MG less than required. However, the situation was clearly reversed in the 13 month period from August 2007 through August 2008. As indicated in

Attachment WMA-IR-119, inputs from the Mountain Water System during this period were clearly inadequate for the reported WOM usages.

Finished water quantities were based upon meter readings contained in the reports entitled "Molokai Properties Intercompany Water Sales", as included in the public record for PUC Docket No. 2008-0115. Losses through the water storage and treatment facilities at Puu Nana and Maunaloa were calculated in Exhibit WMA-202. Actual water values supplied through the Mahana Pump Station were obtained from meter readings contained in MPU's Attachment CA-IR-37a for the period of November 2008 through August 2009. Values for September 2009 and October 2009 were taken from MPU's Attachment WMA-IR-119.

Although these calculations provide some insight into the relative amounts of water delivered to the Puu Nana Raw Water Reservoir and subsequently into the treatment plant, many questions remain to be answered; to wit:

- How far back in time does one need to go in order to determine the net raw water balance between the two utilities?
- What changes in operating procedures, practices and methods need to be implemented?
- Is compensation for the net balance appropriate? Repayment in kind?
- What additional reports should be required of MPU, to ensure the Public Utilities Commission is aware of subsequent water swaps or water banking practices?

Q. Does this complete your testimony?

A. Yes, it does.

ROBERT B. MARUSICH
ELECTRICAL ENGINEER

EDUCATION

1961	B.S., Engineering Physics, University of California, Berkeley
1972	Certificate in Business Administration, University of California, Irvine

EMPLOYMENT HISTORY

1991 - Present	Electri-Planners, Inc President
1977 - 1991	Robert B. Marusich and Associates Owner and General Manager
1974 - 1976	Mantech of New Jersey Corporation Manager, Western Operations
1969 - 1974	CONSULTEC Division, NUS Corporation, A subsidiary of Brown and Root, Inc. Manager, Western Operations
1961 - 1969	Autonetics Division, North American Rockwell Corporation Engineering Supervisor, 1967 -1969 Research and Project Engineer, 1961 - 1966

REGISTRATION

Electrical Engineer - State of California License No. E7809

DIRECTLY RELATED EXPERIENCE

Construction

Electrical Engineer of record for at least five hundred projects with major emphasis on the remodel/expansion of industrial, school and commercial buildings. More than twenty years of varied experience in the design and specification of power, lighting and control systems, components, circuits and applications. Recent specialized experience in the analysis and solution of power quality problems - - ranging from large scale computer rooms to factory floor environments (production machinery, associated numerical/computer controls and testing equipment). Extensive "hands on" field experience concerning rearrangements, improvements and repairs of power systems in critical use facilities such as hospitals, main frame computer centers and continuous-process production plants.

Project Management

Served as project manager for research and engineering service contracts with the U.S. Government, local government agencies and industrial clients. Also provided technical and administrative assistance to clients' managerial personnel under consulting arrangements. Developed, prepared and implemented policies, procedures, plans, schedules, cost estimates, budgets, controls and directives for a wide range of R&D projects.

Systems Engineering
Developed and analyzed alternative technical approaches for major military and commercial projects. Structured alternate candidates to highlight one or more facets of each project. Evaluated candidate approaches with respect to performance, cost, development and production schedules, reliability and safety viewpoints. Recommended one approach for each project and summarized work in formal reports for clients. Representative projects include:

Environmental Alternatives for San Diego Region
(San Diego County Comprehensive Planning Organization)

Advanced Communications Center for TRIDENT submarines

Operational readiness testing of shipboard weapon systems;
comparison of mobile vs land-based test ranges

Sonar performance prediction systems for Navy-wide usage

South Texas nuclear power plant site evaluations

Air pollution control requirements and alternatives for U.S. Navy

Water Loss Calculations for the Retail Distribution System
October 2008 through October 2009

Inputs		
Kaluakoi Project Meter		
10/26/2009 Meter Reading	957,108,400	
09/26/2008 Meter Reading	819,836,400	
		137,272.0
Moana Makani Meter		
10/26/2009 Meter Reading	92,708,900	
09/26/2008 Meter Reading	83,990,100	
		8,718.8
Total Water Input		145,990.8
Billed Outputs		
Total Billed Usage – MPU	138,419.0	
Total Billed Usage - Kualapuu (WOM)	(24,840.0)	
Total Billed Usage – Retail Service Area		113,579.0
Puuokoli Reservoir Inventory Gain		
10/26/2009 Measurement		
09/26/2008 Measurement		
Segment Losses		
Total Water Input	145,990.8	
Total Water Billed	(113,579.0)	
		32,411.8
As percentage of input:		
(32,411.8/145,990.8) x 100% =		22.2%
As percentage of billings:		
(32,411.8/113,579.0) x 100% =		28.5%

Monthly Water Usage and Loss Calculations for Retail Service Area
October 2008 through October 2009

Month	Total Retail Metered Usage	Total MPU Usage (Billed)	Kualapuu Usage (Billed)	Total Retail Service Area Usage	Retail Service Area L&U
2008					
October	13,755	11,691	1,979	9,712	4,043
November	10,574	11,005	2,219	8,786	1,788
December	6,465	6,120	1,654	4,466	1,999
2009					
January	6,166	6,717	1,871	4,846	1,320
February	8,082	7,366	1,806	5,560	2,522
March	8,882	10,403	1,949	8,454	428
April	11,956	11,127	1,874	9,253	2,703
May	11,087	11,449	1,942	9,507	2,300
June	13,080	11,055	1,568	9,487	3,593
July	13,257	12,466	2,096	10,370	2,887
August	12,491	11,115	2,074	9,041	3,450
September	14,878	15,035	2,040	12,995	1,883
October	13,700	12,870	1,768	11,102	2,598
November					
December					
Total	145,093	138,419	24,840	113,579	31,514

Water Loss Calculations for
Puunana/Maunaloa Water Storage & Treatment Facilities
October 2008 through October 2009

Inputs		
Mahana Pump		
October 2009 (WMA-IR-119)		17,018
September 2009 (WMA-IR-119)		15,593
08/31/2009 Meter Reading	1,038,413	
09/30/2008 Meter Reading	(895,369)	
		143,044
		175,655
Mountain Water System		
10/26/2009 Meter Reading	124,787,300	
09/26/2008 Meter Reading	(80,270,400)	
		44,516.9
Total Metered In		220,171.9
Outputs		
Kaluakoi Project Meter		
10/26/2009 Meter Reading	957,108,400	
09/26/2008 Meter Reading	(819,836,400)	
		137,272.0
Moana Makani Meter		
10/26/2009 Meter Reading	92,708,900	
09/26/2008 Meter Reading	(83,990,100)	
		8,718.8
Maunaloa (WOM) Meter		
10/26/2009 Meter Reading	897,265,000	
09/26/2008 Meter Reading	(868,451,000)	
	28,814,000	
Less Moana Makani	(8,718,800)	
		20,095.2
Manawainui (WOM) Meter		
10/26/2009 Meter Reading	19,575,000	
09/26/2008 Meter Reading	(16,231,500)	
		3,343.5
Total Metered Out		169,429.5

Inventory Gains

Puunana Raw Water Reservoir

10/26/2009 Measurement		
09/26/2008 Measurement		

Maunaloa Finished Water Reservoir

10/26/2009 Measurement		
09/26/2008 Measurement		

Segment Losses

Total Metered In	220,171.9	
Total Metered Out	(169,429.5)	
Inventory Gains		50,742.4

As percentage of metered input
(50,742.4/220,171.9) x 100% = 23.0%

As percentage of metered output
(50,742.4/169,429.5) x 100% = 29.9%

Diesel Fuel Expense With Actual Losses

Line	Description	Factor	Extension
1.	Billed water usage in retail service area for test year (TG)		104,000
2.	Losses in retail service area As percentage of billed water usage	28.5%	29,640
3.	Finished water required at project meters		133,640
4.	Losses in Puunana Water Treatment Plant As percentage of water required at meters	29.9%	39,958
5.	Puunana Raw Water Reservoir gains/losses		---
6.	Raw water required from Mahana Pump/MIS		173,598
7.	MIS retention - 10% of water input	11.11%	19,289
8.	Raw water required into MIS		192,887
9.	Water usage in Kualapuu for test year (Bulk rate sales to WOM)		26,000
10.	Production requirement from Well #17		218,887
11.	Diesel fuel required (gallons)	33.0%	72,233
12.	Diesel fuel cost per gallon at PFAC base rate	$2.568	
13.	Diesel fuel expense with actual losses		
	Kualapuu Bulk Sales (26,000 x 0.33 x $2.568) =	$22,033	
	Retail Sales Area (192,887 x 0.33 x $2.568) =	$163,460	
			$185,493

14. Diesel Fuel Expense per Billed TG at PFAC Base Rate

Kualapuu Bulk Sales	($22,033 / 26,000) =	$0.84742
Retail Sales Area	($163,460 / 104,000) =	$1.57173

Sources / Notes:
1. All water amounts in TG units (1,000 gallons)
2. Water usage in MPU retail sales area as per Exhibit WMA-206
3. Losses in MPU retail service area as per Exhibit WMA-201
4. Losses in Puunana Storage & WTP as per Exhibit WMA-202
5. Diesel fuel cost per gallon taken from most recent entry in Attachment CA-IR-36(a) Part B

Diesel Fuel Expense With Losses Limited to 10% of "Water Available for Sale"

Line	Description	Factor	Extension
1.	Billed water usage in retail service area for test year (TG)		104,000
2.	Losses throughout storage, treatment and distribution system limited to 10% of water available for sale As percentage of billed water usage	11.11%	11,555
3.	Puunana Raw Water Reservoir gains/losses		---
4.	Water available for sale at Mahana Pump/MIS		115,555
5.	MIS retention - 10% of water input	11.11%	12,840
6.	Raw water required into MIS		128,395
7.	Water usage in Kualapuu for test year (Bulk rate sales to WOM)		26,000
8.	Production requirement from Well #17		154,395
9.	Diesel fuel required (gallons)	33.0%	50,950
10.	Diesel fuel cost per gallon at PFAC base rate	$2.568	
11.	Diesel fuel expense with 10% loss limit		
	Kualapuu Bulk Sales (26,000 x 0.33 x $2.568) =	$22,033	
	Retail Sales Area (128,395 x 0.33 x $2.568) =	$108,807	
			$130,840
12.	Diesel Fuel Expense per Billed TG at PFAC Base Rate		
	Kualapuu Bulk Sales ($22,033 / 26,000) =	$0.84742	
	Retail Sales Area ($108,807 / 104,000) =	$1.04622	

Sources / Notes:

1. All water amounts in TG units (1,000 gallons)
2. Water usage in retail sales area as per Exhibit WMA-206
3. Diesel fuel cost per gallon taken from most recent entry in Attachment CA-IR-36(a) Part B

Mahana 500 hp Pump Constant Calculations

Last Twelve Months (September 2008 through August 2009)

Water Pumped (TG)		
08/31/2009 Meter Reading	1,038,413	
09/01/2008 Meter Reading	(881,196)	
Total		157,217
Electrical Energy Used (kWh)		
August 2009	40,800	
July 2009	42,400	
FY 2009 Billings	446,400	
(July 2008)	(50,400)	
(August 2008)	(61,600)	
Total		417,600

Pump Constant for Last Twelve Months
(417,600 kWh) / (157,217 TG) = 2.65620 kWh/TG

Fiscal Year 2009 (July 2008 through June 2009)

Water Pumped (TG)		
06-30-2009 Meter Reading	1,006,288	
07-01-2008 Meter Reading	(837,939)	
Total		168,349
Electrical Energy Used (kWh)		446,400

Pump Constant for FY 2009
(446,400 kWh) / (168,349 TG) = 2.65163 kWh/TG

Fiscal Year 2008 (July 2007 through June 2008)

Water Pumped (TG)		
06-30-2008 Meter Reading	837,939	
07-01-2007 Meter Reading	(536,121)	
Total		301,818
Electrical Energy Used (kWh)		768,800
Pump Constant for FY 2008		
(768,800 kWh) / (301,818 TG) =		2.54723 kWh/TG

Sources / Notes:

1. Mahana Pump meter readings taken directly from MPU's Attachment CA-IR-37a.
2. Electrical energy usage taken directly from Workpaper MPU 10.2 in Application, as amended in response to CA-IR-36, except for July and August 2009.
3. Electrical energy usage in July and August 2009 taken from Maui Electric Co., Ltd. billings included in the public record for PUC Docket No. 2008-0115.

Mahana 500 hp Pump - - Electricity Expenses

Latest Maui Electric Co., Ltd Bill (07-27-09 to 08-26-09)

Billed Amount	$ 8,205.36	
Billed Usage (kWh)	40,800	
New Base Rate – Mahana 500 hp Pump ($8,205.36) / (40,800 kWh) =		$0.20111/kWh

Base Electricity Expense for Test Year – Mahana 500 hp Pump

Water Pumped in Test Year (TG)	115,555 TG	
Pump Constant	2.65620 kWh/TG	
Electrical Energy Usage (kWh) (115,555 TG) x (2.65620 kWh/TG)	306,937 kWh	
Test Year Allowed Expense (322,787 kWh) x ($0.20111per kWh) =		$61,728

Historical Billing Data for Puu Nana Electric Meter and Metered Water Deliveries
October 24, 2007 through September 24, 2009

Date Read	Electricity Usage (kWh)	Billed Water Usage MPU Retail Service Area	Metered Water Usage Maunaloa	Metered Water Usage Manawainui
2007				
10-24-07	15,200			
11-23-07	11,740			
12-24-07	9,280			
2008				
01-24-08	10,040			
02-25-08	13,820			
03-25-08	12,880			
04-23-08	10,340			
05-23-08	9,900			
06-24-08	8,840			
07-24-08	9,000			
08-25-08	9,340			
09-24-08	10,220			
10-24-08	10,320	9,712	1,438.4	430.3
11-24-08	7,660	8,786	1,560.2	529.2
12-24-08	6,020	4,466	1,281.8	306.4
2009				
01-26-09	5,200	4,846	1,357.2	484.6
02-23-09	5,520	5,560	1,252.4	463.4
03-24-09	7,540	8,454	1,576.9	205.5
04-23-09	8,160	9,253	1,323.3	0.0
05-22-09	7,700	9,507	1,921.4	153.0
06-24-09	8,660	9,487	1,687.7	0.0
07-24-09	9,040	10,370	1,538.1	300.9
08-25-09	8,180	9,041	1.765.7	0.0
09-24-09	9,820	12,995	1,772.5	246.2
Totals Last 12 Months	93,820	102,477	18,476	3,120

Puu Nana Water Treatment Plant - - Process Constant Calculations
September 24, 2008 through September 24, 2009

Line	Description	Factor	Extension
1.	Billed water usage in MPU retail service area		102,477
2.	Losses in MPU retail service area As percentage of billed water usage	28.5%	29,206
3.	Finished water required at MPU project meters		131,683
4.	Finished water delivered through Maunaloa project meter		18,476
5.	Finished water delivered through Manawainui meter		3,120
6.	Total finished water through all meters		153,279
7.	Losses in Puu Nana Water Treatment Plant As percentage of water required at meters	29.9%	45,830
8.	Puu Nana Raw Water Reservoir gains/losses		---
9.	Raw water required from Mahana Pump/MIS and Mountain Water System		199,109
10.	Electrical Energy Consumption (kWh)		93,820
11.	Process Constant (93,820 kWh) / (199,109 TG) =	0.47120 kwh/TG	

Notes:
1. Billed water usage in MPU retail sales area and finished water deliveries through Maunaloa and Manawainui meters for twelve month period obtained from Exhibit WMA-206, page 1
2. Actual losses in MPU retail service area as calculated in Exhibit WMA-201
3. Actual losses in Puu Nana Storage & WTP as calculated in Exhibit WMA-202
4. Electrical energy usage for twelve month period entered on line 11 obtained from Exhibit WMA-206, page 1

Puu Nana Water Treatment Plant - - Electricity Expenses

Line	Description	Factor	Extension
1.	Latest Maui Electric Co., Ltd. Bill, Dated 09-24-2009		
	Billed Amount	$3,115.91	
	Billed Electricity Usage	9,820 kWh	
2.	New Base Rate for Puu Nana Meter ($3,115.91) / (9,820 kWh) =		$0.31730 / kWh
3.	Finished water delivered through Maunaloa meter in Test Year (TG)	18,500	
4.	Finished water delivered through Manawainui meter in Test Year (TG)	3,500	
5.	Total finished water deliveries to WOM		22,000
6.	Losses in Puu Nana Water Treatment Plant	29.9%	6,578
7.	Raw water required from Mountain Water System		28,578
8.	Raw Water Required from Mahana Pump/MIS in Test Year (TG)		115,555
9.	Total raw water required		144,133
10.	Process Constant	0.47120 kwh/TG	
11.	Electrical Energy Usage in Test Year (144,133 TG) x (0.47120 kWh per TG) =	67,916 kWh	
12.	Allowed Electrical Expense in Test Year (67,916 kWh) x ($0.31730 per kWh) =		$21,550

Notes:
1. Raw water required from Mahana Pump Station/MIS for Test Year entered on line 8 obtained from Exhibit WMA-204
2. Process constant entered on line 10 obtained from Exhibit WMA-206, page 2, line 11

Excess Well #17 Water Pumped to the Puu Nana Raw Water Reservoir - -
For the 12 Month Period from November 2008 through October 2009

Finished Water Delivered to MPU Project Meters

Kaluakoi Project Meter		
10/26/2009 Meter Reading	957,108,400	
10/24/2008 Meter Reading	(832,889,400)	
		124,219.0
Moana Makani Meter		
10/26/2009 Meter Reading	92,708,900	
10/24/2008 Meter Reading	(84,691,700)	
		8,017.2
Total Metered Deliveries		132,236.2
Calculated Losses through Treatment Plant and Storage		
(132,236.2 x 0.299)		39,538.6
Required Raw Water From Mahana Pump Station/MIS		171,774.8
Actual Raw Water Deliveries from Mahana Pump		
October 2009 (WMA-IR-119)		17,018
September 2009 (WMA-IR-119)		15,593
08/31/2009 Meter Reading	1,038,413	
10/31/2008 Meter Reading	(910,626)	
		127,787
		160,398
Excess Well #17 Water Delivery to Puu Nana Raw Water Reservoir		
Metered Raw Water Deliveries	160,398.0	
Calculated Raw Water Requirement	(171,774.8)	
		(11,376.8)

As percentage of calculated raw water requirement from Mahana Pump Station/MIS

(11,376.8 / 171,774.8) x 100% = - 6.62%

BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF HAWAII

In the Matter of the Application of MOLOKAI PUBLIC UTILITIES, INC. For review and approval of rate increases; revised rate schedules; and revised rules.	)	DOCKET NO. 2009-0048

DIRECT TESTIMONY AND EXHIBITS OF LARRY K. FUJINO

- Regulatory Expenses
- Salaries, Wages, Payroll Benefits & Taxes
- Rate Design
- Revenue Requirements

DIRECT TESTIMONY OF LARRY K. FUJINO

Q. Please state your name, occupation, and residence?

A. I am Larry K. Fujino. I am a Certified Public Accountant. I live and work in the City and County of Honolulu.

Q. What is the scope of your testimony in this proceeding?

A. I have consulted with the Water Work Group of West Molokai Association ("WMA"), and its attorney. I was asked to assist in the analysis of data, leading to the preparation of testimony and exhibits for use in this proceeding. My engagement is in a written agreement, but the specific assignments actually undertaken have evolved as I reviewed the data.

Q. Have you testified as an accounting expert previously?

A. I have testified in other rate proceedings conducted by the Hawaii Public Utilities Commission. My most recent testimony at the Commission was some time ago, due to the fact that for the past several years I have focused my professional attention on a tax practice and advising small businesses on accounting and regulatory matters. My resume is attached, and marked as Exhibit WMA-300.

Q. Were you given directives by anyone, with regard to the content of your testimony?

A. No. WMA's case was a collaborative effort among WMA's Water Work Group, its attorney, and myself. As WMA's preparation for this case progressed, I first focused on cost accounting issues. As issues became more clearly defined, I compiled results of MPU's operation, computed the required test year revenues, and designed the categories of customers,

aligning costs with rates. I am professionally responsible for this testimony and the supporting exhibits.

Q. Describe your Exhibit WMA-301.

A. This is a relatively simple exhibit, stating a reasonable annual expense for the costs incurred by MPU for its regulatory matters. There are essentially two components: the reasonableness of the costs anticipated to be incurred under normal conditions, and to select an appropriate period of time to amortize those costs.

MPU provided updated costs for portions of two calendar years (2009 and 2010), which comprise MPU's test year. There may be other expenses related to regulatory matters beyond the 12 month test period (e.g. prior to July 1, 2009 and subsequent to June 30, 2010). MPU's December 23, 2009 submittal contains some excessive and disproportionate values. Only as an example, MPU represents it has incurred more than $109,000.00 for legal services for the three month long intervention/discovery phases of this proceeding. That is an unreasonable expense for ratemaking purposes, especially when the sponsor of all of MPU's Responses to IR/SIR's is Robert O'Brian, whose fees are not included in the $109,000 amount.

For an operation with only six employees, less than $1,000,000 of rate base, and 214 customers, I believe MPU's projection of $300,000 for regulatory matters is excessive. The processes of normalizing expenses and determining what is reasonable for rate making purposes dictate a substantial disallowance. MPU may expend in excess of $350,000, which is set forth in MPU Counsel's recent correspondence, which I have incorporated into my Exhibit WMA-301. If MPU chooses to spend excessive amounts of money to process a regulatory case, that is MPU's choice, but the

Commission must give consideration to the ratepayers and the benefits they will receive from all expenditures when determining reasonable and normal amounts for inclusion in the year analysis. I recommend $100,000 as a normalized regulatory expense.

WMA is in accord with MPU's concept for two automatic adjustment clauses. As a result, MPU's next rate proceeding should be deferred for more years than the three years MPU recommends, due to the impact of adjustment clauses on such large cost components. I have used a seven year period to amortize the $100,000.00, resulting in $14,287.00 as the reasonable amount for regulatory matters, for the test period.

Q. Your recommended amount is approximately four percent (4%) of what MPU will actually spend in just one year.

A. Your question may be a factually correct statement. But the issue is "What is a reasonable amount for MPU for regulatory matters for the 12 month period of time used to evaluate reasonable expenses under normalized conditions?" I stand firm on my proposed test year amount of $14,286.00.

Q. Please describe Exhibit WMA-302.

A. My Exhibit WMA-302 reviews MPU's proposed salaries, payroll, taxes and benefits for the test year. I estimate $144,003 to be the reasonable amount for the 12 month test period. This contrasts with MPU's comparable cost as $209,865, or a difference of $65,862. This "difference" is not merely an arbitrary "disallowance" on my part. My recommendation is based on an analysis of the work that is normally done by utility employees.

Q. Please explain your method of analysis.

A. I reviewed MPU's projections and justification and disagreed with them, for several reasons. The reasons include, but are not limited to, the following: (a) hiring a seventh

employee, at a time when MPU is experiencing operating losses, (b) an apparent escalation of total payroll costs over the past several years, (c) increasing the number of employees when the Company has lost more than thirty percent (30%) of demand for its commodity, and (d) complications due to the shift from MPU's "cost of goods sold" approach imposed mid-test year and mid-calendar year 2008. Lacking historical data from the Company's records to support allocations of payroll costs to specific job/cost duties, I quantified the operational tasks and placed time/labor values on them. This was done using MPU's responses to various IRs and SIRs and is detailed in my Exhibit WMA-302.

Q. What does Exhibit WMA-303 show us?

A. Exhibit WMA-303 shows the allocation of WMA's test year costs between fixed and variable. My calculation of MPU's results of operations illustrates the components which change with WMA's adjustments for labor, benefits, fuel and power expense and regulatory expense. It is noteworthy that MPU has previously allocated its costs between fixed and variable, but has not taken the necessary step of constructing rates based on the allocations. I have done that.

Q. Does your Exhibit WMA-304 mirror Witness Dunham's Exhibit WMA-101?

A. It does. I prepared the exhibit for Mr. Dunham's benefit, and to assist WMA's Water Work Group to assess MPU's situation in how best to deal with a matter of obvious concern to WMA's membership.

Q. What is the basic objective of WMA's rate design?

A. WMA's objective is to assist MPU and its customers to stabilize rates and stabilize revenues. The present method relied upon by MPU to generate revenues has to change.

MPU proposes to superimpose the two hundred and two percent (202%) increase on the permanent rates, without any change in design. MPU states the "existing rate structure...is a reasonable structure at this time." (MPU D/T, p.40). I strongly disagree with MPU's position in this regard, for three fundamental reasons.

First, the demands for water in the service area have changed significantly over the past few years. The one customer which consumed at least thirty percent (30%) of the system's water, is no longer operating. But the costs of the plant dedicated to serving all customers -- including the golf course -- continue on in spite of the shutdown.

Secondly, MPU's present rate structure attempts to recover upwards of ninety percent (90%) of its total revenue requirement from its usage charge. Roughly speaking, MPU's cost profile is fifty-five percent (55%) fixed costs and forty-five percent (45%) variable (or usage-related) costs. MPU's rate design prevents the Company from recovering its fixed cost revenue requirement from customers who do not consume water. Under MPU's existing structure, MPU is charging consumers for more of the fixed costs than they are responsible for. The annual fixed costs of MPU are significantly more than the $160,656.00 MPU proposes to charge for the fixed costs.

Third, MPU has never done a cost of service study and states emphatically that it has no intention of ever doing one. Seeing the situation for what it is, I analyzed the data MPU provided WMA. Witness Marusich and I have done the best we can do with the data available to us.

Q. **How is WMA's analysis of costs reflected in WMA's proposed rate structure?**

A. WMA's analyses of MPU's costs are reflected in most of WMA's exhibits. WMA attempted to assign different types and categories of costs to those groups responsible for the incurrence of such costs. In contrast, MPU merely took its proposed 202% proposed increase, and spread it across-the-board, regardless of the nature of the cost item. For example, MPU increased each of its monthly customer charges (by meter size) by 300-302% over the permanent customer charge, regardless of how such costs are incurred. But more problematic is the fact that MPU's original monthly costs for facilities were under-estimated, if estimated at all.

Q. **How confident is WMA that its proposed design of cost recovery is preferable to MPU's?**

A. Historical consumption data suggests WMA's proposed design responsibly tracks costs recovery. We are without pump running times, time-of-day consumption data, accurate water flows to specific consumer groups, etc., but historic usage points in the direction WMA is headed. As an illustration, when in use, the golf course consumed between 30 and 45 percent of MPU's total water. Under WMA's assignment of costs, the golf course is assigned approximately twenty five percent (25%) of the system's capacity costs. This is insufficient, but it is preferable to MPU's proposal.

Q. What factors did you rely upon to spread the capacity revenue requirement over the rate structure?

A. No single factor or set of factors was determinative. Many factors were considered assessing each line of expenses. It appears that the basic structure in the existing tariff was designed without the cost components having been quantified. WMA took on that task in this case, though MPU did it in a superficial manner in the 2002 and 2008 cases. Demographics were considered, as well as characteristics of the properties (lot sizes,

remoteness/concentration/proximity), values of the property with and without ready access to potable water, terrain/pumping requirements, size/length of water mains, etc. I considered values, as well as costs.

Q. What pricing concepts will MPU be conveying to consumers if WMA's design it adopted?

A. A key concept is that property owners do not have to be consumers of water to be MPU customers. There are approximately 300 land parcels and nearly 300 residential units in MPU's service area, but MPU bills only 214 customers on a monthly basis. Yet, 820 parcels/units have ready access to potable water, enhancing the value of each property. Normally, the original owner of the parcel would have paid the initial costs for the availability of water in the initial purchase price of the property. Not so here; thus the owners of the unimproved parcels, and the owners of the shuttered hotel and golf course, have a continuing responsibility to pay for their shares of the fixed costs for making potable water readily available.

Q. What are WMA proposed tariffed rates for monthly customer charges?

A. WMA's proposed rates are set forth in my Exhibit WMA-305. The essence of my rate design is to enable MPU to recover a majority of fixed costs from customers who either had been consumers of water or who have MPU's facilities making potable water readily available.

Q. What assurances can you provide the Commission and the Company that WMA's proposed rates will recover all of the revenue required?

A. My Exhibit WMA-306 shows the sources from which revenues will be collected. The Monthly Facilities Charge for each category of customers significantly increases the former customer service charge. MPU proposes that most of these fixed costs are to be recovered in usage charges. Bill impact analysis discloses how unfair this is to consumers. More generally,

with WMA's proposal, MPU will be recovering approximately the same revenues as it is currently collecting, but from different sources. That is the import of my Exhibit WMA-306.

Q. Does that complete your testimony?

A. Yes, it does.

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CURRICULUM VITAE

EDUCATION

University of Hawaii, College of Business Administration, Manoa
B.B.A. in Accounting, 1972
Certified Public Accountant, 1978

EMPLOYMENT HIGHLIGHTS

1974 - 1978	Nishihama & Kishida, CPA's, Inc. Senior Accountant Provided auditing, accounting, tax and financial advisory services for numerous clients in diverse industries. Emphasis on audits of government and non-profit organizations.
1978 - 1981	State of Hawaii, Department of Regulatory Agencies Public Utilities Division Senior Auditor, conducted and supervised audits of transportation and utility companies regulated by the Public Utilities Commission. Appeared as an expert witness providing testimony in rate increase cases of Hawaiian Electric, Hawaiian Telephone, and Kauai Electric.
1981 - 1984	Leland Maynard & Co., CPA's Manager, Certified Public Accountant Provided auditing, accounting, tax and financial advisory services for numerous clients in diverse industries. Supervised bookkeeping and accounting staff in their performance of tax, audit, and management advisory services.

1984 - 1990	Tokumoto, Yamamoto & Ichishita, CPA's, Inc. Principal, Certified Public Accountant Provided auditing, accounting, tax and financial advisory services for numerous clients in diverse industries. Recruited, hired and supervised administration and professional personnel, coordinated staff training programs.
1990 - 1991	Interstate Security Guards, Inc. Officer, Director, Chief Financial Officer Supervised accounting and management staff in Hawaii and eight California branches with approximately 250 employees. Reorganized financially troubled company culminating in the sale of the company.
1994 - 2003	Pacific Knight Security, Inc. Officer, Director, Chief Financial Officer Responsible for the supervision of administration and management staff.
1992 - Present	Larry K. Fujino, CPA Sole Practitioner of Larry K. Fujino, Certified Public Accountant Licensed to practice in the State of Hawaii. Emphasis on providing accounting, tax and financial advisory services to clients in diverse industries. Clients and industries include attorneys, commercial fishermen, contractors, dentist, doctors, entertainers, farmers, manufacturers, mortgage brokers, optometrist, petroleum jobber, real estate agents, travel agency, non-profit organization, restaurants, nursery, real estate investment and management.
2005 - Present	Associated Accountants, LLC. Managing Member Provide management, accounting and tax services.

PROFESSIONAL ASSOCIATIONS
Hawaii Society of Certified Public Accountants
American Institute of Certified Public Accountants

MEMBERSHIP / AFFILIATIONS
Officer, Director of the Hawaii International Sports and Cultural Foundation
Saint Francis Hospital Healthcare Foundation Planning Committee

Regulatory Expense
Test Year Ended June 30, 2010

Line No.		(A) Molokai Public Utilities Estimates Regulatory	(B) Legal	(C) (a) Total	(D) WMA Adjustments	(E) WMA Test Year
1	Preparation & Filing	43,879	43,908	87,787		
2	Discovery	32,812	99,360	132,172		
3	Discovery - estimated	15,600	10,000	25,600		
4	Rebuttal	19,500	20,000	39,500		
5				285,059	(185,059)	100,000
6	Hearing, Briefing & Interim Rate:	18,200	40,000	58,200	(58,200)	0
7	Travel	3,000		3,000	(3,000)	0
8	Other		5,500	5,500	(5,500)	0
9				351,759	(251,759)	100,000
10	Amortization Period					7 years
11	Test Year Expense					14,286

(a) 12/23/09 Response to CA-IR-49a

Supplemental Attachment CA-IR-49a
Docket No. 2009-0048
Page 1 of 3

Molokai Public Utilities, Inc.
Regulatory Expense
Test Year Ending June 30, 2010

Line #	Description	[1] Ref:	[2] Amount	[3] Total
	PREPARATION AND FILING - Actual			
1	Regulatory		$43,879	
2	Legal		43,908	
3	Travel			
4	Other Non-Labor			
5	Sub-Total			$ 87,787
	DISCOVERY - REVISED			
	Actual to November 30, 2009			
6	Regulatory		32,812	
7	Legal		99,360	
8	Travel			
9	Other Non-Labor			
10	Sub-Total			132,172
	Estimated For December 2009			
11	Regulatory		15,600	
12	Legal		10,000	
13	Travel			
14	Other Non-Labor			
15	Sub-Total			25,600
	REBUTTAL			
	Estimated From January to February			
16	Regulatory		19,500	
17	Legal		20,000	
18	Travel			
19	Other Non-Labor			
20	Sub-Total			39,500
	HEARING, BRIEFING AND INTERIM RATES			
	Estimated to Completion			
21	Regulatory		18,200	
22	Legal		40,000	
23	Travel		3,000	
24	Other Non-Labor		5,500	
25	Sub-Total			66,700
26	TOTAL RATE CASE EXPENSE			$351,759

Supplemental Attachment CA-IR-49a
Docket No. 2009-0048
Page 2 of 3

Molokai Public Utilities, Inc.
Regulatory Expense
Test Year Ending June 30, 2010

REGULATORY CHARGES

Line #	Description	[1] Ref:	[2] Amount	[3] Sub_Total	[4] Total
	PREPARATION AND FILING - Actual				
1	2008 – March & April		$8,724		
2	– October		4,427		
3	– November		521		
4	– December		5,208		
5	2009 – January		11,197		
6	– February		9,375		
7	– June		4,427		
8	Total Preparation & Filing				$ 43,879
	DISCOVERY - REVISED				
	Actual to November 30, 2009				
9	2009 – September		10,417		
10	– October		7,812		
11	– November		14,583		
12	Sub-Total			32,812	
	Estimated For December 2009				
13	2009 – December		15,600		
14	Sub-Total			15,600	
15	Total Discovery				48,412
	REBUTTAL				
	Estimated From January to February				
16	2010 – January		13,000		
17	– February		6,500		
18	Total Rebuttal				19,500
	HEARING, BRIEFING AND RATES				
	Estimated to Completion				
19	2010 – March		7,800		
20	– April		5,200		
21	– May		-		
22	– June		5,200		
23	Sub-Total			18,200	
24	Travel, Hotel and Expenses		3,000		
25	Other		500		
26	Sub-Total			3,500	
27	Total Hearing, Briefing & Rates				21,700
					$ 133,491

Molokai Public Utilities, Inc.
Regulatory Expense
Test Year Ending June 30, 2010

LEGAL CHARGES

Line #	Description	[1] Ref:	[2] Amount	[3] Sub_Total	[4] Total
	PREPARATION AND FILING - Actual				
1	2008 – March & April				
2	– October				
3	– November				
4	– December				
5	2009 – January				
6	– February				
7	– June		43,908		
8	Total Preparation & Filing				$ 43,908
	INTERVENTION/DISCOVERY - REVISED				
	Actual to November 30, 2009				
9	2009 – September and October		48,702		
10	– November		50,658		
11	Sub-Total			99,360	
	Estimated From November 1 to December				
12					
13	2009 – December		10,000		
14	Sub-Total			10,000	
15	Total Discovery				109,360
	REBUTTAL				
	Estimated From January to February				
16	2010 – January				
17	– February		20,000		
18	Total Rebuttal				20,000
	HEARING, BRIEFING AND INTERIM RATES				
	Estimated to Completion				
19	2010 – March				
20	– April				
21	– May				
22	– June		40,000		
23	Sub-Total			40,000	
24	Travel, Hotel and Expenses				
25	Other		5,000		
26	Sub-Total			5,000	
27	Total Hearing, Briefing & Rates				45,000
					$ 218,268

Salaries, Wages, Employee Taxes and Benefits Workpaper
Test Year Ended June 30, 2010

Line No.		(A) MPUI Estimates	(B) WMA Adjustments	(C) WMA Test Year
1	Personnel Charges	145,601	(45,710)	99,891
2	Payroll taxes & employee benefits	64,264	(20,152)	44,112
3	Total Labor, Payroll taxes & Employee Benefits	209,865	(65,862)	144,003

Computation of Salaries, Wages, Employee Taxes and Benefits:

		Labor Hours	Rate/ Hour	Test Year
4	Personnel Charges	5,953	16.78	99,891
5	Payroll taxes & employee benefits	5,953	7.41	44,112
6	Total Labor, Payroll taxes & Employee Benefits			144,003

Labor Hours:
WMA Exhibit 302, page 2 of 2 Breakdown of Test Year Labor Expense by Task and / or Job Assignment

Computation of average hourly labor rate:

Salaries & Wages - MPU Workpaper 10.1, including wages increases	279,240
Total Labor Hours - MPU Workpaper 10.1, including new hire	16,640
Average hourly rate (279.240 / 16,640)	16.78

Computation of average tax and benefit rate:

Employee benefits and payroll taxes - MPU Workpaper 10.1	123,376
Total Labor Hours - MPU Workpaper 10.1, including new hire	16,640
Average hourly employee benefits & payroll taxes rate (123,376 / 16,640)	7.41

Breakdown of Test Year Labor Expense by Task and/or Job Assignment

Line	Description	Quantity	Man-Hrs	Extension
1.	Monthly Meter Readings (3 man-days per month per MPU)	12	24	288
2.	Monitor Tanks, Reservoirs, Pumps (52 wks x 5 days / week) – 10 holidays	250	2	500
3.	Water Treatment Plant Operations (52 wks x 5 days / week) – 10 holidays	250	8	2,000
4.	Monitor Well # 17 Ops (52 weeks x 3 times per week)	156	3	468
5.	Well # 17 Maintenance (20 man-hours per month)	12	20	240
6.	Facility and Vehicle Maintenance (52 weeks x 8 man-hours per week)	52	8	416
7.	Respond to Customer Calls or Meter Work (3 times per month)	36	6	216
8.	Leak Repairs or Lateral Replacements (2 times per month)	24	24	576
9.	Supervision and Administration (52 weeks x 4 hours per week)	52	4	216
10.	Total Direct Labor			4,920
11.	Contingencies at 10% of Direct Labor			492
12.	Total Direct Labor and Contingencies			5,412
13.	Paid Absence at 10% of Total Direct Labor and Contingencies			541
14.	Total Labor (man-hours)			5,953

Sources / Notes:

1. Meter reading labor amount (24 man-hours) taken from MPU's response to CA-IR-71.
2. Work categories, employee duties and some labor estimates taken directly from MPU's response to WMA-SIR-111

Allocation Between Fixed and Variable Costs
Test Year Ending June 30, 2010

Line No.	Description	(A) WMA Test Year	(B) Fixed Costs	(C) Variable Costs
1	Labor, Payroll Taxes & Employee Benefits	144,003	108,002	36,001
2	Fuel Expense	130,840		130,840
3	Power Expense	82,330		82,330
4	Department of Agri - Rental/Service	136,497	136,497	
5	Materials & Supplies	85,583	21,396	64,187
6	Affiliated Charges	9,600	9,600	
7	Professional & Outside Services	14,137	14,137	
8	Repairs & Maintenance	65,812	49,359	16,453
9	Insurance	13,000	13,000	
10	Regulatory Expense	14,286	14,286	
11	General & Administrative	13,318	13,318	
12		0		
13		0		
14	Total O & M Expense	709,406	379,595	329,811
15	Taxes Other Than Income	56,061		56,061
16	Depreciation	92,479	92,479	
17	Amortization	0		
18	Income Taxes	0		
19	Diff due to changing factors	0		
20	Total Operating Expenses	857,946	472,074	385,872

Results of Operations
Test Year Ending June 30, 2010

Line No.	Description		(A) MPUI Estimates	(B) WMA Adjustments	(C) WMA Test Year
1	Monthly Customer Charge		160,656		454,518
2	Water Usage Charge		1,164,241		419,900
3	Consumer Service Charge		0		0
4	Customer Availability Charge		0		0
5	Late Fees		1,200		3,600
6	Total Operating Revenues		1,326,097		878,018
7	Labor, Payroll Taxes & Employee Benefits		209,865	(65,862)	144,003
8	Fuel Expense		282,524	(151,684)	130,840
9	Power Expense		231,067	(148,737)	82,330
10	Department of Agri - Rental/Service	(a)	136,497		136,497
11	Materials & Supplies		85,583		85,583
12	Affiliated Charges		9,600		9,600
13	Professional & Outside Services		14,137		14,137
14	Repairs & Maintenance		65,812		65,812
15	Insurance		13,000		13,000
16	Regulatory Expense	(b)	55,000	(40,714)	14,286
17	General & Administrative		13,318		13,318
18					
19					
20	Total O & M Expense		1,116,403	(406,997)	709,406
21	Taxes Other Than Income	(c)	84,671		56,061
22	Depreciation		92,479		92,479
23	Amortization		0		0
24	Income Taxes	(d)	0		0
25	Diff due to changing factors		2		0
26	Total Operating Expenses		1,293,555		857,946
27	Operating Income		32,542		20,072
28	Average Rate Base		996,161		996,161
29	Return on Rate Base				2.01%
30	Target Rate of Return				
31	Increase in Rate of Return				
32	Increase in NOI				
33	Gross Revenue Conversion Factor				1.06820
34	Proposed rates				878,018
35	Present rates				(439,838)
36	Increase in Revenue				438,180
37	Percent Increase in Revenue				99.62%

(a) Revised by response to CA - IR 41
(b) 12/31/09 Response to CA-IR-49a updates this amount
(c) Public Service Tax 5.885% + Public Utility Fee 0.500%
(d) Response to CA - SIR - 20 removes Income Taxes

WMA'S PROPOSED RESTRUCTURED RATE DESIGN TO BE INCORPORATED INTO MPU'S TARIFFS

I. **MONTHLY FACILITIES CHARGE**

A. **Retail**

CUSTOMER CATEGORIES	RATE
Improved Parcels	$49.50
Unimproved Parcels	$35.00
Condominiums (per unit)	$20.00
Hotel (per unit)	$20.00
Golf Course	$8,400.00
Beach Park	$200.00
Beach Access Points	$100.00

B. **Wholesale**

WOM – Kaalapuu Town	$4,635.00
WOM – Water Treatment Processing	$4,322.00

II. **CONSUMPTION CHARGE (per TG)**

A. Retail	$3.50
B. Wholesale	$2.15

A. WMA'S PROPOSED RECOVERY OF MPU'S REVENUE REQUIREMENT

I. ANNUAL REVENUES MONTHLY FACILITIES CHARGE

RETAIL		
Improved Parcels		$53,460
Unimproved Parcels		$97,440
Condominiums		$83,040
Hotels		$34,560
Golf Course		$100,800
Beach Park		$2,400
Beach Access		$7,200
	SUBTOTAL	**$378,900**
WHOLESALE		
Kualapuu Town		$55,618
WOM Water Treatment Processing		$20,000(e)
	SUBTOTAL	**$75,618**
TOTAL FIXED CHARGES		**$454,518**

II. USAGE CHARGES (per 1000 gallons)

Retail @ 3.50		$364,000
Wholesale @ 2.15		$55,900
	SUBTOTAL	**$419,900**

III. Other

Late Fees		$3,600
TOTAL		**$878,018**

CERTIFICATE OF SERVICE

The requisite number of copies of the foregoing "Direct Testimonies and Exhibits of West Molokai Association," are to be served by U.S. Mail, with prepaid postage, or to be hand-delivered the same date as filing the original, plus eight copies, with the Commission. Also, the document is available to the parties, via the internet.

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Department of Commerce and Consumer Affairs
Division of Consumer Advocacy
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DATED: Honolulu, Hawaii, January 6, 2010.

WILLIAM W. MILKS, Attorney for Applicant
Molokai Public Utilities, Inc.